



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: RB211-524C2
UNIQUE ID NUMBER: 1RR006
COMBUSTOR: Package 1
ENGINE TYPE: TF

BYPASS RATIO: 4.5
PRESSURE RATIO (π_{00}): 29.1
RATED THRUST (F_{00}) (kN): 224.8

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	179.4	227.6	84.5	18.7
AS % OF ORIGINAL LIMIT	915.4	192.9	86.1	98.4
AS % OF CAEP/2 LIMIT (NO _x)			107.6	
AS % OF CAEP/4 LIMIT (NO _x)			128.9	
AS % OF CAEP/6 LIMIT (NO _x)			146.5	
AS % OF CAEP/8 LIMIT (NO _x)			173.0	

DATA STATUS

x PRE-REGULATION
- CERTIFICATION
x REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
x DEDICATED ENGINES TO PRODUCTION STANDARD
- OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
(ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
x OUT OF PRODUCTION (DATE: -)
- OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO _x	SMOKE NUMBER
TAKE-OFF	100	0.7	2.480	0.00	0.66	41.90	14.5
CLIMB OUT	85	2.2	2.020	0.22	1.63	32.30	10.9
APPROACH	30	4.0	0.740	4.42	18.90	10.40	2.2
IDLE	7	26.0	0.300	54.20	81.00	3.37	0.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1016	26209	41768	16401	-
NUMBER OF ENGINES							
NUMBER OF TESTS							
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				116.5	185.4	72.9	14.5
SIGMA (D _p /F ₀₀ in g/kN, or SN)							
RANGE (D _p /F ₀₀ in g/kN, or SN)							

ACCESSORY LOADS

POWER EXTRACTION 0 (kW)
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS
AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	102
TEMPERATURE (K)	288
ABS HUMIDITY (kg/kg)	0.005

FUEL

SPEC	AVTUR
H/C	1.91
AROM (%)	20

MANUFACTURER: Rolls-Royce plc
TEST ORGANIZATION: Rolls-Royce Ltd
TEST LOCATION: SINFIN-Derby
TEST DATES: 01/09/1986

REMARKS

1. Package 1 combustor
2. SN mode data scaled from 1RR004

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)